

**EXAMINER'S AMENDMENT AND STATEMENT OF REASONS FOR ALLOWANCE**

***Status of Claims***

Claims 32, 34-36, 46, 50 and 72 are amended.

Claims 33, 38-40, 42, 45, 51-71, 76-80, 82-87, 89-119, 121-128 and 130-133 are cancelled.

Claims 134-136 are entered as new.

Claims 32, 34-37, 41, 43, 44, 46-50, 72-75, 81, 88, 120, 129 and 134-136 are pending.

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Leon Radomsky on 17 July 2008.

The application has been amended as follows:

**Replace the entire claim 74 with the following: --**

**74.** A surface plasmon resonant optical device, comprising:

a radiation transparent substrate; and

a plurality of metal islands on the substrate;

wherein:

adjacent metal islands are separated by a distance that is less than at least one first predetermined wavelength of incident radiation to be provided onto the device; and

the metal islands are configured such that the incident radiation is resonant with at least one plasmon mode on the metal islands, thereby enhancing transmission of radiation having at least one second peak wavelength between the plurality of metal islands; and

wherein the metal islands comprise at least two cells;

wherein a first period of first openings in the first cell is different than a second period of second openings in a second cell;

wherein a transmission of the radiation having the second peak wavelength through the first openings in the first cell is enhanced due to the first period; and

wherein a transmission of the radiation having the third peak wavelength through the second openings in the second cell is enhanced due to the second period. --

***Allowable Subject Matter***

**Claims 32, 34-37, 41, 43, 44, 46-50, 72-75, 81, 88, 120, 129 and 134-136 are allowed over the prior art of record.**

The following is an examiner's statement of reasons for allowance:

**Regarding claims 32 and 72**, the prior art of record fails to teach alone or in combination a wavelength separation device comprising, along with the other claimed features, that the metal film or metal islands comprise at least two cells, a first period of first openings in the first cell that is different than a second period of second openings in a second cell, a transmission of the radiation having the second peak wavelength

through the first openings in the first cell that is enhanced due to the first period; and a transmission of the radiation having the third peak wavelength through the second openings in the second cell that is enhanced due to the second period.

**Regarding claim 74**, the prior art of record fails to teach alone or in combination a wavelength separation device comprising, along with the other claimed features, that the metal islands comprise at least two cells, a first period of first openings in the first cell that is different than a second period of second openings in a second cell, a transmission of the radiation having the second peak wavelength through the first openings in the first cell that is enhanced due to the first period; and a transmission of the radiation having the third peak wavelength through the second openings in the second cell that is enhanced due to the second period.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis M. LeGasse Jr whose telephone number is (571) 272-9798. The examiner can normally be reached on Monday through Thursday 7:00 am to 5:30 pm E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

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